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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,363	09/25/2003	Charles B. Kendall	GEMS 0221 PA	2362
27256	7590	06/17/2005	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034			SONG, HOON K	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,363

Applicant(s)

KENDALL, CHARLES B.

Examiner

Hoon Song

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-25 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9 and 11-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Janouin et al. (US 4995065)

Regarding claim 1, Janouin teaches an energy-absorbing device (16, 17) for an imaging tube having a housing (2, 8), said device comprising an energy-absorbing body (16,17) mechanically coupled to said housing (8) and adapted to absorb kinetic energy (since the casting containing directed at said housing (2, 8) and generated from the radial release of at least one material fragment (since Janouin's anode target and applicant's target are considered as same, Janouin's target will also generate an accelerated target fragment from the eccentric rotational force of rotational anode and the target fragment will hit the casting 3, then the casting 3 will generate an kinetic energy such as high pitch acoustic energy, noise or any vibration to the x-ray housing 2) within the imaging tube (figure 1, column 3 line 20-21, since substance casting, 16, 17 is positioned in radial direction of a rotating target, the casting is considered as kinetic energy absorbing device).

Regarding claim 2, Janouin teaches said energy-absorbing body (16, 17) is directly coupled to said housing (2, 8) and receives and absorbs non-acoustical kinetic

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energy (vibration or any waveform) generated from the radial release of said at least one material fragment from a rotating anode.

Regarding claim 3, Janouin teaches an imaging tube comprising;

a housing (8);

a rotating target (5) coupled within said housing (8) and generating at least one energy wave (heat energy); and

at least one energy-absorbing device (16, 17) mechanically coupled to said housing (8), separated from an imaging tube frame (3) and proximate said rotating target (5), said at least one energy-absorbing device adapted to absorb and sustain energy within said at least one energy wave (figure 1, column 3 line 20-21, since the substance casting, 16, 17 will absorb heat energy).

Regarding claim 4, Janouin teaches said imaging tube frame (3) coupled between said rotating target (5) and said housing (8) and containing at least a portion of said at least one energy wave, said at least one energy-absorbing device absorbing energy within said portion (since Janouin's anode target and applicant's target are considered as same, Janouin's target will also generate an accelerated target fragment from the eccentric rotational force of rotational anode and the target fragment will hit the casting 3, then the casting 3 will generate an kinetic energy such as high pitch acoustic energy, noise or any vibration to the x-ray housing 2)

Regarding claim 5, Janouin teaches a cooling material (16) containing at least a portion of said at least one energy wave, said at least one energy-absorbing device absorbing energy (column 3 line 29-30).

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Regarding claim 6, Janouin teaches said at least one energy-absorbing device (16) is within said housing (2, 8) (column 3 line 29-30).

Regarding claim 7, Janouin teaches said at least one energy-absorbing device (16, 17) is mechanically coupled to said housing (2, 8) and between said rotating target (5) and said housing (8).

Regarding claim 8, Janouin teaches said at least one energy-absorbing device (16, 17) is toroidal in shape (figure 1).

Regarding claim 9, Janouin teaches said at least one energy-absorbing device (16, 17) is directly coupled to an inner surface of said housing (8).

Regarding claim 11, Janouin teaches said at least one energy-absorbing device is oriented to receive said at least one energy wave generated from the separation of material fragments from said rotating target (figure 1, column 3 line 20-21, since substance casting, 16, 17 is positioned in radial direction of a rotating target, the casting having substance is also considered as kinetic energy absorbing device).

Regarding claim 12, Janouin teaches said at least one energy-absorbing device is oriented to receive energy waves emitted within an emission range that is approximately a $\pm 30^\circ$ span from a perpendicular axis, which extends perpendicular to a center axis of rotation of said rotating anode (figure 1).

Regarding claim 13, Janouin teaches said at least one energy-absorbing device is coupled to said housing using at least one technique selected from bonding (column 3 line 21)

Regarding claim 14, Janouin teaches at least one energy-absorbing device coupler is integrally formed as part of the housing (fastening support, column 3 line 26)

Regarding claim 15, Janouin teaches said at least one energy-absorbing device coupler is a coupler selected from at least one of a bracket, a fastener, and a cover (column 3 line 26).

Regarding claim 16, Janouin teaches said at least one device coupler is integrally formed as energy-absorbing part of the housing (fastening support, column 3 line 26).

Regarding claim 17, Janouin teaches said at least one energy-absorbing device comprises an outer skin (figure 1).

Regarding claim 18, Janouin teaches said at least one energy-absorbing device stabilizes and reduces pressure exertions on said housing (since the casting is positioned in radial direction of a rotating target, the casting having substance is considered to absorb pressure exertion of rotating anode).

Regarding claim 19, Janouin teaches said at least one energy-absorbing device comprises an X-ray opening (figure 1).

Regarding claim 20, Janouin teaches an imaging system having an imaging tube comprising;

a housing (8, 2);

a rotating target (5) coupled within said housing (8, 2) and generating at least one kinetic energy wave from the radial release of at least one material fragment (since Janouin's anode target and applicant's target are considered as same, Janouin's target

will also generate an accelerated target fragment from the eccentric rotational force of rotational anode and the target fragment will hit the casting 3, then the casting 3 will generate an kinetic energy such as high pitch acoustic energy, noise or any vibration to the x-ray housing 2) within said housing (since Janouin's anode target and applicant's target are considered as same, Janouin's anode target will generate target fragments which will cause kinetic energy wave); and

at least one energy-absorbing device (16, 17) mechanically coupled to said housing (8, 2), proximate said rotating target (5), and absorbing and sustain energy within said at least one kinetic energy wave, which is directed at said housing (figure 1, column 3 line 20-21, since the substance casting, 16, 17 is positioned in radial direction of a rotating target, the casting is considered as kinetic energy absorbing device).

Regarding claim 21, Janouin teaches said energy absorbing device (16, 17) is directly coupled to said housing (8, 2) and receives kinetic energy passed through a fluid (column 3 line 6) between said energy absorbing device (16, 17) and a rotating target (5) and generated from the radial release of said at least one material fragment from said rotating target (5).

Regarding claim 22, Janouin teaches said energy absorbing device is adapted to absorb pressure exertions on said housing (since the casting is positioned in radial direction of a rotating target, the casting having substance is considered to absorb pressure exertion).

Regarding claim 23, Janouin teaches a method of absorbing kinetic energy within an image tube having a housing comprising:

radially releasing at least one material fragment (since Janouin's anode target and applicant's target are considered as same, Janouin's anode target will generate target fragment which will cause kinetic energy wave);

mechanically coupling an energy absorbing body (16, 17) to the housing (column 3 line 20-21);

orienting said energy absorbing body to receive said at least one material fragment (figure 1); and

absorbing and sustaining kinetic energy directed at the housing in response to reception of said at least one material fragment (figure 1, column 3 line 20-21, since the casting is positioned in radial direction of a rotating target, the casting having substance is considered as kinetic energy absorbing device).

Regarding claim 24, Janouin teaches receiving said kinetic energy passed through a fluid (column 3 line 6) between said energy absorbing body (16, 17) and a rotating target (5) and generated from the radial release of said at least one material fragment from said rotating target.

Regarding claim 25, Janouin teaches absorb pressure exertions on said housing via said energy absorbing body (since the casting is positioned in radial direction of a rotating target, the casting having substance is considered to absorb pressure exertion).

Allowable Subject Matter

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 10, the prior art fails to teach said at least one energy-absorbing device formed of a material selected from at least one of a foam, a closed cell foam, a polyolefin foam, a olefin foam, a polymer and a polyolefin plastic as claimed in dependent claim 10.

Response to Arguments

Applicant's arguments filed 6/6/2005 have been fully considered but they are not persuasive.

The applicant argues that it is Janouin's casting 17 is incapable of sustaining the reception of kinetic energy received from the release of material fragment from a rotating anode because it would damage to the casting also. However the examiner disagrees.

Janouin clearly teaches the casting 17 having substance, wax 18 is mechanically attached to the housing 2 of the x-ray source and the casting is positioned in a radial direction of the rotating anode 5. Regardless it is desirable or not, the casting will receive, absorb and sustain any form of energy such as acoustic energy, heat energy or any wave (vibration) generated from the rotating anode because of it is positioned in the radial direction from the rotating anode. Accordingly, Janouin teaches the claims limitation of an energy-absorbing device which is adapted to absorb and sustain kinetic energy directed at the housing and generated from the radial release of at least one

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material fragment within the imaging tube and the applicant's argument is not persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is (571) 272-2494. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272 - 2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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HKS



DAVID V. BRUCE
PRIMARY EXAMINER